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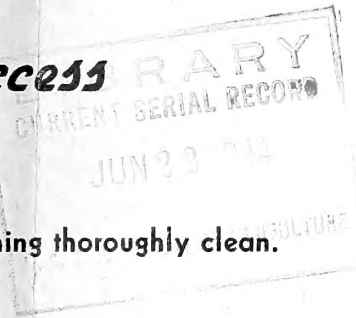




# HOME CANNING of fruits and vegetables

## *Seven Points for Success*

1. Can only fresh food, in tiptop condition.
2. Have food, jars, everything used in canning thoroughly clean.
3. Work quickly, so as to can "freshness."
4. Heat food hot enough and long enough to make bacteria and other organisms harmless, so they won't "work" in the food and make it spoil.
5. Follow up-to-date directions and timetables, backed up by scientific research.
6. Make sure jars are sealed airtight, to keep spoilage organisms outside.
7. Store canned food in a cool, dark, dry place.



U. S. DEPARTMENT OF AGRICULTURE

AWI-93



## RIGHT METHOD FOR EACH FOOD

In the air, water, and soil at all times, there are tiny organisms—molds, yeasts, and bacteria—that cause fresh food to spoil.

When you can fruits and vegetables, you heat them hot enough and long enough to make these organisms harmless, so the food will keep. Heating in a canner is called processing.

**For fruits, tomatoes, pickled vegetables—**use a boiling-water bath. You can process these acid foods safely in boiling water.

**For corn, peas, beans, and other common vegetables (except tomatoes)—**use a steam pressure canner. To process these foods safely in reasonable time takes a temperature higher than boiling. It takes 240° F. or higher. The only way to get these high temperatures is to hold steam under pressure.

New pressure canners are being manufactured all the time. They are no longer rationed.

If you have no pressure canner, team with someone who has. Or maybe you can go to a community canning center.

### *A word of warning on other canning methods:*

**OVEN CANNING** is dangerous in more ways than one. Even though the oven goes to 250° F. or higher, food in the jars stays at about boiling point (212°). For vegetables, that's not hot enough to make bacteria harmless.

Also, oven canning has caused serious accidents to persons and property. When jars seal during processing, steam builds up inside the jars and they may explode. The oven door may fly off...glass may fly out...you may be hit and seriously hurt by the flying pieces...and your kitchen wrecked.

## GETTING YOUR EQUIPMENT READY BEFORE CANNING TIME

**Steam pressure canner.**—Before each canning season make sure your pressure canner is in perfect working order.

Check a dial-type pressure gage with a test gage, to find whether it registers right. Ask the dealer from whom you bought the canner if he can do this testing for you, or try your county home demonstration agent. If you must send the gage to the manufacturer, pack it like delicate glass.

If you find your gage is 1 to 4 pounds off, be sure to allow for this; see page 5. If it is 5 or more pounds off, get a new gage.

Cleaning is all a weighted type of gage needs.

Wash a pressure canner thoroughly before and after each using. Never put the lid into water.

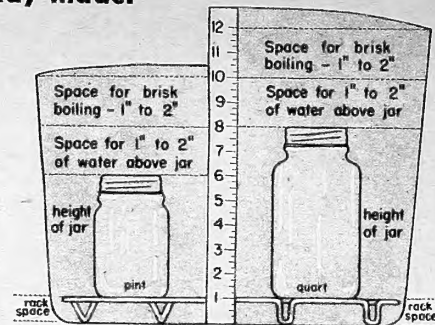
Be sure that pet cock, safety valve, and edges of lid and canner are clean at all times. If the openings to pet cock and safety valve are not absolutely clear, use a toothpick or small pointed tool to clean them. Pull a string or thin strip of cloth through the opening.

**OPEN-KETTLE CANNING** is wasteful for fruits and tomatoes. When canned this way, food is cooked in an ordinary kettle, then packed into hot jars and sealed. Bacteria can get into jars when food is transferred from kettle to jar and cause the food to spoil.

For vegetables open-kettle canning is dangerous. They never become hot enough to destroy the bacteria.

Use this method only for preserves, pickles, and other foods with enough sugar or vinegar to help keep them from spoiling.

**Water-bath canner, home-made or ready-made.**



Any big, clean vessel will do for a boiling-water-bath canner, if it's deep enough to let water boil well over the tops of the jars... has a good lid... and a rack to keep the jars from touching bottom.

The rack may be wire or wood, but don't use pine. Have partitions in rack, if possible, to keep jars from touching one another or falling against the side of the canner.

If a steam pressure canner is deep enough, you can use that for a water bath. Set the lid on loosely; don't fasten or let stick. And have the pet cock wide open, so that steam escapes all the time the water boils.

**Jars, lids, rings.**—Use only perfect ones. Discard chipped, cracked, warped jars; dented, bent lids. Use clean new rubber rings of the right size for your jars. Don't test by stretching.

Wash jars and lids (all but metal lids with sealing compound) in hot soapy water and rinse well. Be sure you have the right lid to fit every jar.

## KNOW YOUR JARS AND HOW TO SEAL THEM

### Main types are:



**Zinc porcelain-lined cap with shoulder rubber ring, to fit standard Mason jar.**

**When canning.**—Fit wet ring down on jar shoulder, but don't stretch more than needed. Fill jar. Then screw cap down firmly and turn it back  $\frac{1}{4}$  inch.

**After canning.**—As soon as you take jar from canner, quickly screw cap down tight, to complete seal.



**Lightning-type jar is sealed with glass lid and rubber ring, held in place by wire bail.**

**When canning.**—Fit wet rubber ring on ledge at top of empty jar. Fill jar. Put on glass lid. Push long wire over top of lid, so it fits into groove. Leave short wire up.

**After canning.**—As soon as you take jar from canner, quickly push short wire down to complete seal.



**Glass lid and top-seal rubber ring, held in place by metal screw band, to fit standard Mason jar.**

**When canning.**—Fill jar, fit rubber ring on glass lid. Put lid on jar with rubber side down. Screw metal band on tight . . . then, using your thumb as a guide, turn back almost a quarter turn, or so that band and jar just mesh together. Caution: If the band is screwed too tight, the jar may break.

**After canning.**—As soon as you take jar from canner, screw band down tight.

**Next day.**—When jar has cooled, take off screw band if you can without forcing. If the band sticks, cover for a minute or two with a hot, damp cloth, to loosen.



**Flat metal lid edged with sealing compound, held in place by metal screw band, to fit standard Mason jar.**

**When canning.**—Fill jar; put lid on so that sealing compound is next to glass. Screw metal band on firmly, but not so hard that you cut through the compound. When screwed down firmly, this lid has enough "give" to let air escape during canning.

**After canning.**—This is a self-sealer. Leave "as is" when you take from canner. Don't tighten further; you may break the seal.

**Next day.**—When jar has cooled, take off screw band if you can without forcing. If band sticks, cover for a minute or two with a hot, damp cloth, to loosen.



**Coffee or other commercial jars—"63's"—with flat metal lid edged with sealing compound, bought new, held in place by metal screw cap that came with jar.**

From old metal cap pry out paper lining or boil and scrape out sealing compound. Punch from inside a small hole or two in the cap. Then the cap will act as a screw band.

**When canning.**—Fill jar. Put lid on, so sealing compound is next to glass. Screw metal cap on firmly, but not so hard that you cut through the compound. When screwed on firmly, this lid has enough "give" to let air escape during canning.

**After canning.**—This is a self-sealer. Leave cap "as is" when you take from the canner. Don't tighten further, or you may break the seal.

**Next day.**—When jar has cooled take off screw cap if you can without forcing. To loosen the cap if it sticks, cover for a minute or two with a hot, damp cloth.



## FOOD—RIGHT AND READY

The fresher the food is, the better looking, better tasting canned product it makes. Also, the better its chances to keep.

Choose fresh, firm, ripe fruits; young, tender vegetables. Can them quickly. "Two hours from garden to can," is a good rule.

If you must hold fruits or vegetables, keep them cool and well ventilated. If you buy food to can, try to get local produce.

To help you figure how much canned food you'll get from a certain quantity fresh, see pages 13 and 15.

Sort the food for size and ripeness—it will cook more evenly. Don't use any food for canning that shows signs of decay. Even if you cut the bad spots out, bacteria may lurk in the rest and spoil the whole batch. Set aside soft but sound fruit for juice or jam.

Wash off every trace of dirt. Earth contains some of the bacteria hardest to kill. Wash small lots of food at a time, and if necessary put through several waters. But don't let food soak—you lose food value. Lift food out of water, so you won't drain dirt back on it. Handle food gently, don't bruise it.

**Heat before packing.**—Heating food before it is canned is called precooking. The quick heating shrinks food, so that more will go into jars. Also, packing it hot shortens the processing time in the canner.

Have hot liquid ready to combine with the solid food. It usually takes  $\frac{3}{4}$  to 1 cup of liquid to a quart jar to fill in around solid food and cover it well.

## PRECOOKING FRUITS— with or without sugar

Heat fruits one of these ways—in fruit juice, in sirup, or in water. Some fruits when heated yield enough juice of their own without more liquid. Adding sugar before heating fruit will help to draw out juice. See canning table, pages 12–13, on how to prepare each fruit.

**To extract juice.**—Crush and heat soft but sound juicy fruit to boiling. Keep heat low, so fruit won't stick to pan. Strain, and sweeten if desired.

**To make sirup.**—Boil sugar and juice or water for 5 minutes. Remove scum.

Sirup	Sugar (Cups)	Juice or water (Cups)
Thin.....	1	3
Moderately thin.....	1	2
Medium (for sour fruit).....	1	1

The general wartime rule is 1 pound of sugar (2 cups) to 4 quarts of canned fruit.

Use honey, if you wish, to replace as much as half the sugar called for in canning; or use corn sirup to replace as much as one-third.

Don't use sirups that have strong flavor. Don't use brown sugar or unrefined sirups like sorghum; they may cause the food to spoil.

Don't use saccharin; it may give the canned food a bitter flavor.

**Without sugar.**—Sugar helps canned fruit hold its shape, color, and flavor. But sugar isn't necessary to keep fruit from spoiling. If your sugar runs short, put up some fruit without sugar, and sweeten to taste when you serve. Process unsweetened fruit the same as sweetened.

## PRECOOKING VEGETABLES

Add boiling water to vegetables (except tomatoes) and bring to a rolling boil. Follow canning table directions for each vegetable, see pages 14–15.

## HAVE JARS HOT . . . FILL QUICKLY

Shortly before they are needed, place clean glass jars, glass lids, and metal screw caps in water and heat to boiling.

Use clean damp cloth to wipe metal lids edged with sealing compound, and dip into boiling water just before using.

Scrub rubber rings with a brush in hot soapy water. Then boil 10 minutes in water and baking soda (1 quart water, 1 tablespoon soda, to each dozen rings). Rinse well. Start with fresh soda and water for each lot. This may help to keep rings from flavoring food.

For shoulder-seal jars, put a hot wet rubber ring on each hot jar just before filling.

Have food boiling hot and work briskly. Pack fairly loosely. It's hard for heat to get to the center of a tight pack.

Cover with boiling liquid.

Leave space at the top for food to expand. This is called head space. The canning table, pages 12 and 14, tells how much to leave. Work out air bubbles with a knife blade.

Use a clean, damp cloth to wipe the rubber ring or sealing edge clean. One seed or sticky bit may keep lid from making an airtight seal with jar.

Adjust the jar lid, as each kind requires.

## INTO THE CANNER

**Using a water-bath canner.**—Have water boiling in the canner. Put in jars as soon as packed. Add boiling water if needed, to bring water level over jar tops. Put lid on canner.

Count time as soon as water comes to a rolling boil. Keep boiling steadily for as long as the timetable directs for the food you are canning.

If you live at an altitude of 1,000 feet or more, you will need to process longer, see page 12.

Add boiling water if needed, to keep the jar tops covered.

**Using a pressure canner.**—Follow the manufacturer's directions for your own canner—especially for a wartime model. Here are general pointers:

Before you put in jars, have 2 or 3 inches of boiling water in canner, so it won't boil dry and be damaged.

Place hot, filled jars on rack. Don't let them touch or tip over. Steam must flow around and over each jar.

Fasten the canner cover securely, so that no steam escapes except at the open pet cock. If the cover has thumb nuts, grasp opposite nuts and tighten part way. Then continue around the cover, gradually tightening each pair. Repeat until all nuts are tight.

Watch until steam pours steadily from pet cock or weighted-gage opening. Let it pour 10 minutes or more, so all air is driven from canner, leaving only steam inside. Then close the pet cock or put on the weighted gage and let pressure rise to 10 pounds.

If your dial gage has been reported 1 to 4 pounds off, you can correct for it this way:

*If it is reported high—*

- 1 pound high—process at 11 pounds.
- 2 pounds high—process at 12 pounds.
- 3 pounds high—process at 13 pounds.
- 4 pounds high—process at 14 pounds.

*If it is reported low—*

- 1 pound low—process at 9 pounds.
- 2 pounds low—process at 8 pounds.
- 3 pounds low—process at 7 pounds.
- 4 pounds low—process at 6 pounds.

The moment right pressure is reached, start counting time as the canning table directs for the food you are canning. If you live at an altitude of 2,000 feet or more, you will have to use more pressure. See page 14.

To keep pressure even, adjust heat under canner. Keep drafts from blowing on canner. Uneven pressure may force liquid out of jars. Never try to lower pressure by opening the pet cock.

When time is up, slide canner away from heat. Never try to rush the cooling by fanning the hot canner or pouring cold water on it... you may crack or ruin your canner.

When the pressure returns to zero on dial-type gage, wait a minute or two, then slowly open pet cock. (Waiting longer may make it hard to get the lid off.) Then unfasten the cover and tilt the far side up, so the steam escapes away from you.

## OUT OF THE CANNER

As you take each jar from the canner, complete the seal at once if jars are not self-sealing. The

directions on page 3 tell how to adjust each kind.

If liquid boiled out in canning, seal the jar "as is." Opening a jar to put in more liquid would let in bacteria. Then you'd have to process all over again. Food high and dry may turn dark, but being dry won't cause it to spoil.

Cool jars right side up. Give each jar room so that air can get to all sides. Never set a hot jar on a cold surface or in a draft. Too sudden cooling may break the jar. On the other hand, don't slow down cooling by putting a cloth over jars. This may cause the food to spoil.

## CANNING JUICES TO DRINK

Soft tomatoes or fruits—not firm enough for canning, yet not overripe—make first-rate juice. Be sure there are no bad spots.

Sugar helps to hold color and flavor in fruit juices, but you can do without it.

Juices may be canned in glass jars, or if you have a capper, use bottles with crown caps. Don't try to seal bottles with corks dipped in wax or paraffin... these won't stand processing.

Get glass jars and lids ready, and use them just as in other canning.

If using bottles, see that each is smooth at top, free from nicks and cracks. Wash bottles and heat to boiling, like glass jars. Don't wash crown caps; wipe with a clean, damp cloth. Dip cap in boiling water before using.

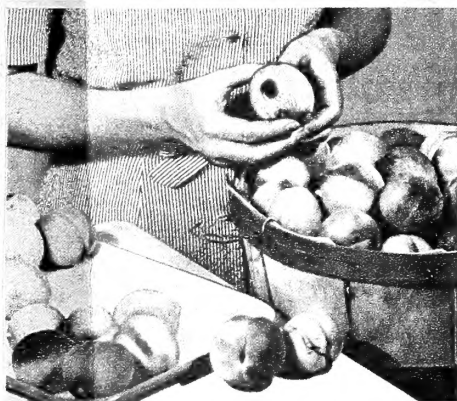
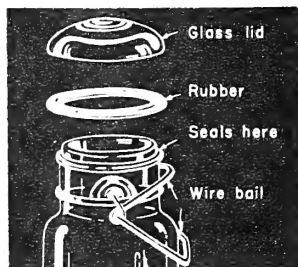
Follow canning-table directions, on page 13. Handle small batches, so you can work quickly. Leave  $\frac{1}{2}$  inch head space in bottles,  $\frac{1}{4}$  inch in jars. Seal bottles tight; adjust jar lids.



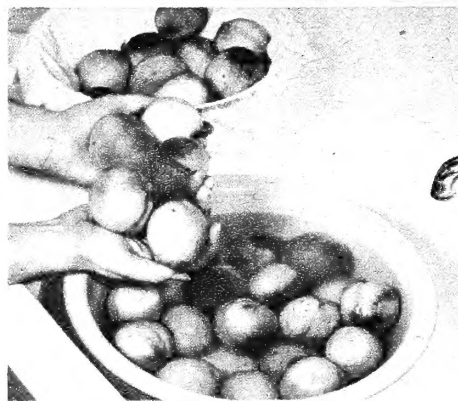
# THIS IS THE WAY . . .

Any fruit is canned very much like this; see pages 12 and 13. And you can use any of the jars described on page 3.

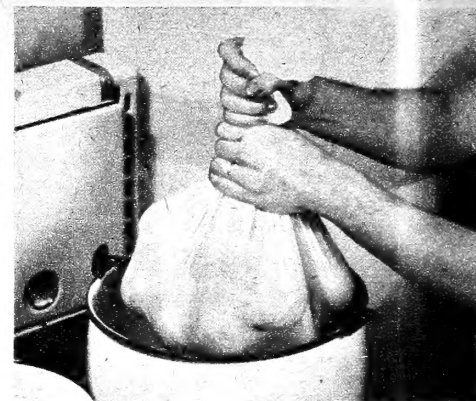
These pictures show the lighting-type jar.



1. Choose peaches that are sound, ripe, firm. Don't use any with decayed spots. Even if you cut out the spots, bacteria may lurk to spoil the rest.



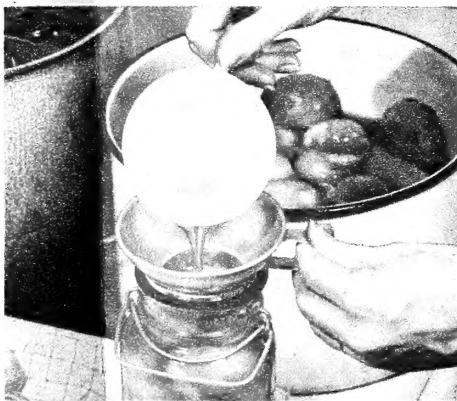
2. Work with only enough for one canner load at a time. Wash fruit well. Lift out of water. Don't bruise.



3. For easy peeling, dip in boiling water about a minute or so, then dip quickly into cold water. A wire basket or cheesecloth will hold the fruit.



8. Meantime, heat clean jars and lids. Put hot wet rubber ring on jar, and pack peaches loosely, one at a time. Leave  $\frac{1}{2}$  inch head space.



9. Cover peaches with boiling liquid, still leaving  $\frac{1}{2}$  inch head space. It usually takes about  $\frac{3}{4}$  to 1 cup of liquid to each quart jar.



10. Work out air bubbles by running a knife blade down the sides of jar. Add more liquid if needed.



11. Wipe jar rim and ring with clean, damp cloth. One sticky bit can keep the jar from sealing air-tight. Put on glass lid.



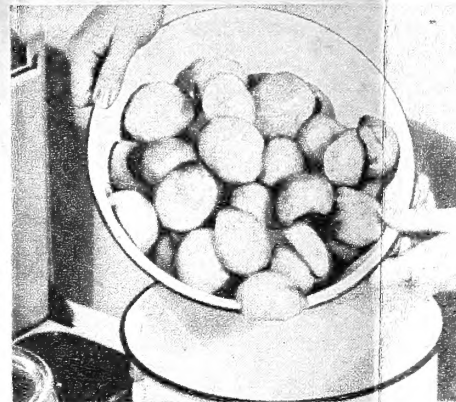
# ... TO CAN A FRUIT



4. Slip off skins; take out pits. Cut in slices or halves. To keep from turning dark, drop at once into 1 gallon of water with 2 table-spoons salt, 2 of vinegar. Then drain.



5. If fruit is juicy, add sugar— $\frac{1}{2}$  cup to each quart of uncooked peaches. Then heat to boiling and pack in its own juice.



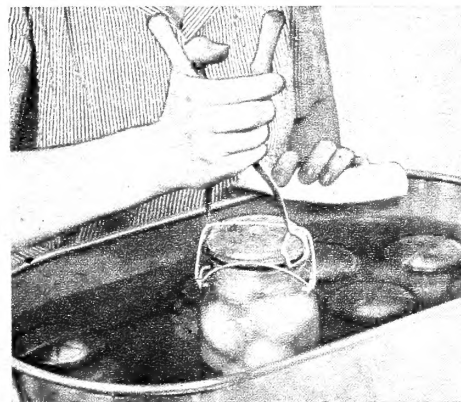
6. For less juicy fruit—drop into boiling sirup. (See page 4.) Heat fruit through, but don't cook until soft.



7. If you're canning without sugar—cook fruit in its own juice. Or add just enough hot water to keep fruit from sticking to pan.



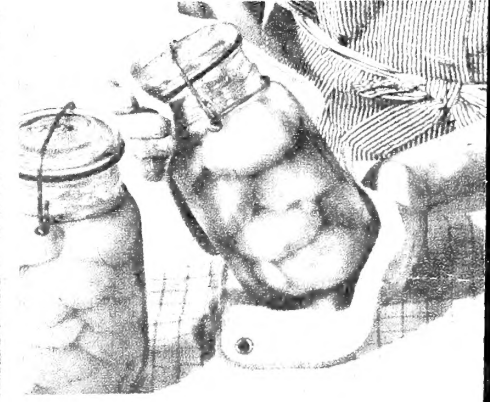
12. Push long wire bail over lid into groove. Leave the short wire up, loose. Work fast and put jars into canner as soon as filled.



13. When all jars are in, see that water comes over tops. Put on canner lid. When water boils hard, count time, and process 20 minutes at sea level; longer at higher altitudes. (See page 12.)



14. When time's up, take out jars; quickly push the short wire down to complete seal of each jar. Protect your hands with thick cloth.



15. Set jars out to cool right side up, on thick cloth or paper. Keep them away from drafts or sudden cold. Don't cover.

**Food spoils if it stands around**



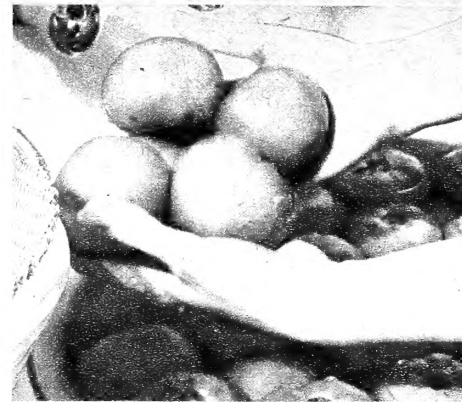
# TOMATOES, LIKE FRUITS, TAKE

Can tomatoes to keep the fine red color, tangy flavor, and a goodly share of the vitamin C.

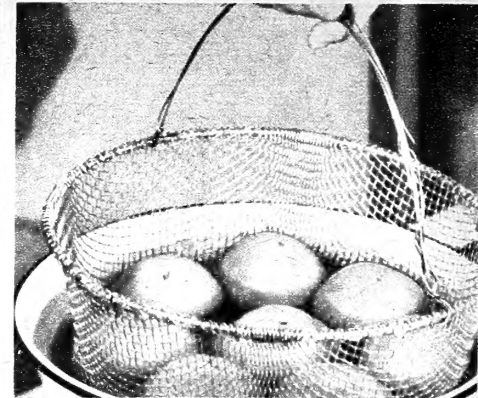
These pictures show the jar with 3-piece top seal. (See page 3 for other kinds.)



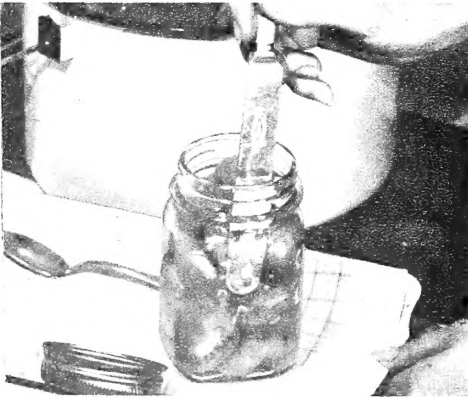
1. Look over every tomato. Use only the ripe, firm, and perfect. Even if you cut out a bad spot, bacteria may be left and ruin the whole batch.



2. Wash tomatoes clean in several waters. Don't bruise. Prepare only enough for one canner load at a time.



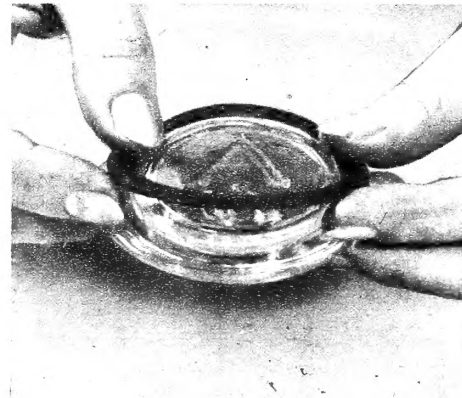
3. Put tomatoes in a wire basket or thin cloth. Dip into boiling water about a minute, then quickly into cold, for easy peeling.



8. Work out air bubbles with a knife blade. Add more juice, if needed.



9. Wipe jar rim with a clean damp cloth. A speck of food on the rim may prevent an airtight seal and cause the tomatoes to spoil.



10. Fit hot wet rubber ring on glass lid. There is a ledge on the underside where the ring fits like a collar.



11. Set the glass lid rubber side down on the jar, so that rubber ring and jar rim are in contact.

# THE BOILING WATER BATH



4. Cut out stem ends and peel. Quarter the tomatoes so they'll heat through quickly.



5. Heat tomatoes in their own juice. Stir while they heat, and let them come to a rolling boil. Meantime heat clean jars and lids.



6. When ready to pack, take one jar at a time from hot water. Fill with hot tomatoes. A funnel is handy. Cover with hot juice to within  $\frac{1}{2}$  inch of top.



7. Add salt—a teaspoon to each quart. Work fast, so tomatoes won't cool.



12. Screw metal band on tight. Then, using your thumb as a guide, turn back almost a quarter turn, or so that band and jar just mesh together. Put jars in canner as soon as filled.



13. Have water 1 or 2 inches over tops. Put on canner lid. When water boils hard, count time, and process 10 minutes at sea level—longer at higher altitudes. (See page 12.)



14. When time's up, take out one jar at a time and quickly tighten screw band. Keep jars top side up, and place on thick cloth or paper to cool.



15. While cooling, keep jars well apart and out of drafts. Next day remove screw bands if you can without forcing. If they stick, cover for a minute or two with a hot, damp cloth, to loosen.

One bad spot may spoil a whole batch

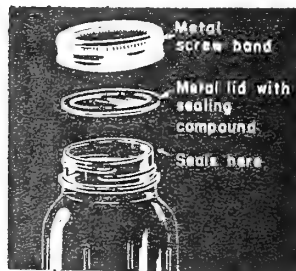




# HOW TO CAN A VEGETABLE

All garden vegetables, except tomatoes, are canned like this (pages 14-15). You can use any of the jars described on page 3.

These pictures show the self-sealing type of jar.



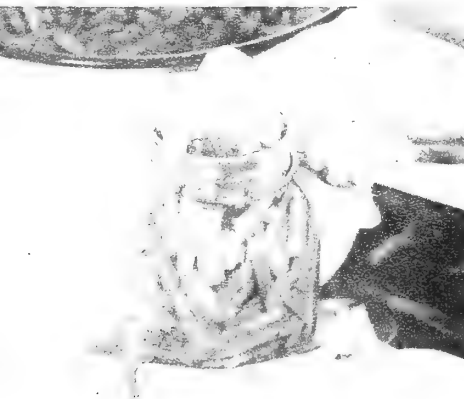
1. Select beans fresh from the vines—  
young, tender, firm, and crisp.



2. Wash beans in several waters,  
until every trace of sand and grit is  
gone. Lift them out of water, so  
dirt won't drain back on them.



3. Trim and cut beans. Prepare  
only enough for one canner load  
at a time. When food stands  
around, the chances of spoilage are  
greater.



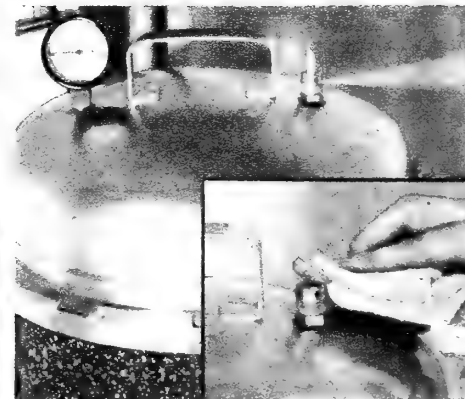
8. Wipe jar rim clean, so that no  
speck of food will keep the lid from  
making an airtight seal with the jar.



9. Dip flat metal lid in boiling water.  
Set it on jar so that sealing compound  
is next to glass. Screw metal band  
on firmly, but not so hard that the  
compound will be damaged.



10. Have 2 or 3 inches of boiling  
water in the pressure canner . . . so  
canner won't boil dry. Place jars so  
they won't touch. Steam must flow  
all around them.



11. Fasten canner cover with care.  
Let steam pour from open pet cock  
or weighted gage opening for at  
least 10 minutes. Then shut pet  
cock, or put on weighted gage.

Pack all vegetables hot



# IN A PRESSURE CANNER



4. Cover beans with boiling water, and boil for 5 minutes. Meantime, have jars clean and hot.



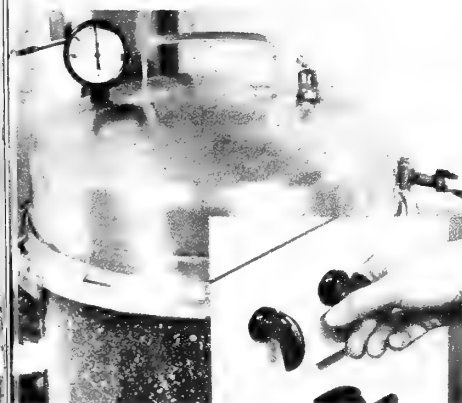
5. When you pack, take one jar from water at a time. Use clean cloths to protect your hands and to keep hot jars off cold surface.



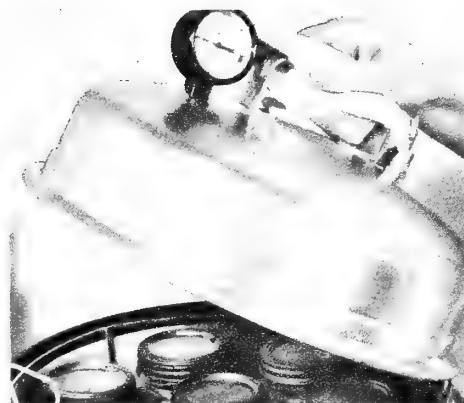
6. Pack hot beans loosely. Cover with cooking liquid, leaving  $\frac{1}{2}$  inch head space. Work quickly.



7. Add salt... a teaspoon to each quart. Work out air bubbles by pushing a knife blade down the sides of the jar.



12. When pressure is at 10 pounds, count time—40 minutes for quarts of beans, 30 for pints, at sea level; for higher altitudes, see p. 14. Adjust heat to keep pressure steady. When time's up, slide canner from heat.



13. When pressure falls to zero wait a minute or two, no longer. Then slowly open pet cock, or take off weighted gage. Unfasten cover. Tilt far side up, away from your face.

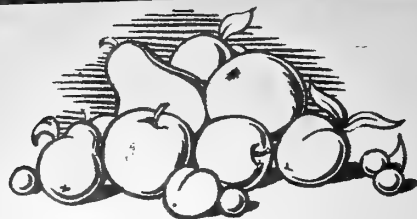


14. To take out jar, grasp the glass shoulder, not the metal cap. This jar is a self-sealer, so don't tighten it any more.



15. Let jars cool on rack or folded cloth, away from drafts. Next day take off screw bands if you can without forcing. If a band sticks, cover for a minute or two with a hot, damp cloth, to loosen.

**Keep pressure even, to hold juice in jars**



## Fruits, tomatoes, pickled vegetables

# CANNING

### Wash With Care

Before starting to peel or cut any food for canning, wash it free from sand or dirt . . . through several waters if need be.

### Head Space

Leave  $\frac{1}{2}$  inch head space when you cover fruits, tomatoes, and pickled vegetables with liquid. This unfilled space is needed because food expands as it heats in canning.

### If You Live Above Sea Level

If you live 1,000 feet or more above sea level, you have to process your food in a boiling-water bath longer. The reason: water boils at a temperature below  $212^{\circ}$  F. at these higher altitudes. So you have to add time to make up for less heat.

Follow these rules: For each 1,000 feet above sea level add 1 minute to processing time given in table at right, if the time called for is 20 minutes or less. If the processing called for is more than 20 minutes, add 2 minutes for each 1,000 feet.

### Starting Hot

Processing times are for hot-packed food—as near boiling as possible when processing starts.

KIND OF FOOD	HOW TO PREPARE	Time to process in boiling-water bath at $212^{\circ}$ F.	
		Pints	Quarts
		Minutes	Minutes
Apples	Pare, core, cut in pieces. To keep from darkening, dip in a gallon of water containing 2 tablespoons of salt and 2 of vinegar. Steam or boil in thin sirup or water 5 minutes. Pack hot; cover with hot liquid. Adjust lids. Process for-----	15	15
	Or make <b>applesauce</b> , sweetened or unsweetened. Pack hot. Adjust lids. Process for-----	10	10
Apricots	Same as peaches.		
Beets, pickled	Cook beets until tender in water to cover. Remove skins; slice. Pack hot. Cover with boiling liquid (2 cups vinegar to 1 cup sugar). Add 1 teaspoon salt to each quart jar. Adjust lids. Process for-----	30	30
Berries (except strawberries)	Drain well after washing. For firm berries, add $\frac{1}{2}$ cup sugar to each quart fruit, cover pan, bring to boil, and shake pan to keep them from sticking. Pack hot; cover with hot liquid. Adjust lids. Process for-----	15	15
	For <b>red raspberries</b> and other soft berries, fill jars with raw fruit and shake down for a full pack. Cover with boiling sirup made with juice. Adjust lids. Process for-----	20	20
Cherries	For pitted cherries, follow directions for firm berries. For cherries with pits, follow directions for firm berries but add a little water to prevent sticking. Adjust lids. Process for-----	15	15
Peaches	For easy peeling, put peaches in wire basket or cheesecloth and dip for a minute or two in boiling water, then quickly into cold. Slip off skins; take out pits. Slice or cut in halves. To keep from darkening, dip in a gallon of water containing 2 tablespoons of salt and 2 of vinegar; drain. If fruit is juicy, add $\frac{1}{2}$ cup sugar to each quart of raw fruit. Heat to boiling. For less juicy fruit—drop into thin to medium sirup, boiling hot, and just heat through. Pack hot; cover with boiling liquid. Adjust lids. Process for-----	20	20
Pears	Peel, cut in halves, core. Same as less juicy peaches.		

# TIMETABLE

## Fruits, tomatoes, pickled vegetables

KIND OF FOOD	HOW TO PREPARE	Time to process in boiling-water bath at 212° F.	
		Pints	Quarts
		Minutes	Minutes
Pimientos, ripe	Place in hot oven for 6 to 8 minutes. Dip into cold water. Remove skins, stems, and seed cores. Pack and add $\frac{1}{2}$ teaspoon of salt to each pint. Do not add liquid. Adjust lids. Process for	40	
Plums, prunes	To can whole, prick skin. Or cut in half. Heat to boiling in juice, or in thin to medium sirup. Pack hot; cover with boiling liquid. Adjust lids. Process for	15	15
Rhubarb	Cut into $\frac{1}{2}$ inch lengths. Add $\frac{1}{2}$ cup sugar to each quart rhubarb and let stand to draw out juice. Bring to boil. Pack hot; cover with hot juice. Adjust lids. Process for	10	10
Sauerkraut	Heat well fermented sauerkraut to simmering—do not boil. Pack into jars; cover with hot juice. Adjust lids. Process for	25	30
Strawberries	Stem berries and add $\frac{1}{2}$ cup sugar to each quart of fruit. Bring slowly to boil. Remove from stove. Let stand overnight. Bring quickly to boil. Pack hot; cover with hot juice. Adjust lids. Process for	15	15
Tomatoes	Use only perfect, ripe tomatoes. Scald, remove stem ends, peel, and quarter. Bring to rolling boil; stir as tomatoes heat. Pack hot; add 1 teaspoon salt to each quart. Adjust lids. Process for	10	10
Tomato juice	Use soft but perfect tomatoes. Remove stem ends, cut into pieces. Simmer until softened. Put through a fine sieve. Add 1 teaspoon salt to each quart. Reheat at once just to boiling. Fill into hot jars or bottles at once. Leave $\frac{1}{4}$ inch head space in jars, $\frac{1}{2}$ inch in bottles. Adjust lids. Process for	15	15
Fruit juices	Berries, red cherries, plums, or blends of these—remove pits; crush the fruit. Heat to simmering. Strain through a cloth bag. Add sugar if desired—about $\frac{1}{2}$ to 1 cup sugar to 1 gallon of juice. Heat again to simmering. Fill into hot jars or bottles. Leave $\frac{1}{4}$ inch head space in jars, $\frac{1}{2}$ inch in bottles. Adjust lids. Process for	5	5
Fruit purees	Use soft, but sound fruit. Put cooked fruit through a fine sieve. Proceed as for fruit juices. Adjust lids. Process for	20	20

## TO FIGURE YIELD OF CANNED FRUIT FROM FRESH

Legal weight of a bushel of a fruit varies in different States. These are average weights:

Fruit	Fresh	Canned
Apples	{ 1 bu. (48 lb.) 2 $\frac{1}{2}$ –3 lb.	16–20 qt. 1 qt.
Berries, except strawberries	{ 24-qt. crate 5–8 cups	12–18 qt. 1 qt.
Cherries, as picked	{ 1 bu. (56 lb.) 6–8 cups	22–32 qt. 1 qt.
Grapes	{ 1 bu. (48 lb.) 2 $\frac{1}{2}$ –3 lb.	16–20 qt. 1 qt.
Peaches	{ 1 bu. (48 lb.) 2–2 $\frac{1}{2}$ lb.	18–24 qt. 1 qt.
Pears	{ 1 bu. (50 lb.) 2–2 $\frac{1}{2}$ lb.	20–25 qt. 1 qt.
Plums	{ 1 bu. (56 lb.) 2–2 $\frac{1}{2}$ lb.	24–30 qt. 1 qt.
Strawberries	{ 24-qt. crate 6–8 cups	12–16 qt. 1 qt.
Tomatoes	{ 1 bu. (53 lb.) 2 $\frac{1}{2}$ –3 lb.	15–20 qt. 1 qt.

Acknowledgment is made to the research laboratories of the National Canners Association for aid in arriving at the processing times and temperatures given in this pamphlet.



# VEGETABLE CANNING

## Wash With Care

Before starting to peel or cut any food for canning, wash it free from sand or dirt . . . through several waters if need be.

## Head Space

Leave 1 inch head space when you cover starchy vegetables—peas, shelled beans, or corn—with liquid. Leave  $\frac{1}{2}$  inch head space for other foods in this table. This unfilled space is needed because food expands as it heats in canning.

## How Much Salt

Add 1 teaspoon of salt to each quart of vegetables when packed.

## If You Live Above Sea Level

If you live at 2,000 feet or more above sea level, you have to process your food with higher pressures than 10 pounds. The rule is: For each 2,000 feet above sea level add 1 pound pressure. Process the food for the same length of time given in the table at the right.

## Starting Hot

Processing times in the table are for hot packed food . . . as near boiling as possible when processing starts.

KIND OF FOOD	HOW TO PREPARE	Time to process in pressure canner at 10 pounds (240° F.)	
		Pints	Quarts
		Minutes	Minutes
Asparagus	Trim off scales; cut into inch pieces. Cover with boiling water; boil 2 or 3 minutes. Pack hot; cover with hot cooking liquid. Adjust lids. Process for.....	35	40
Beans	<b>Fresh lima, shelled.</b> Can only young, tender beans. Cover with boiling water; bring to boil. Pack hot; cover with fresh boiling water. Adjust lids. Process for.....	45	55
	<b>Snap.</b> Cut into pieces. Cover with boiling water; boil 5 minutes. Pack hot; cover with hot cooking liquid. Adjust lids. Process for.....	30	40
	<b>Green soybeans, shelled.</b> Cover with boiling water; boil 3 or 4 minutes. Pack hot; cover with fresh boiling water. Adjust lids. Process for.....	60	70
Beets	Can only baby beets. Before washing, trim off tops, leaving 1 inch of stem. Boil until skins slip easily—about 15 minutes. Skin and trim. Pack hot; cover with fresh boiling water. Adjust lids. Process for.....	40	45
	<b>Pickled beets.</b> See fruit and tomato canning table.		
Carrots	Scrape, slice. Cover with boiling water; boil 5 minutes. Pack hot; cover with hot cooking liquid. Adjust lids. Process for.....	40	45
Corn	<b>Whole-grain.</b> Cut corn from cob so as to get most of the kernel but not the husk. To each quart of corn add 1 teaspoon salt and 1 pint boiling water. Heat to boiling and pack hot. Add no more salt and no extra water. Adjust lids. Process for.....	65	75
	<b>Cream-style.</b> Too hard to process. Not recommended.		
Greens	Can only freshly picked, tender greens. Pick over; wash thoroughly. Cut out tough stems and midribs. Boil in a small amount of water, until wilted. Pack hot and loosely. Cover with hot cooking liquid; add boiling water if needed. Adjust lids. Process for.....	95	105



# T I M E T A B L E

KIND OF FOOD	HOW TO PREPARE	Time to process in pressure canner at 10 pounds (240° F.)	
		Pints	Quarts
Okra	Can only tender pods. Cover with boiling water; bring to boil. Pack hot; cover with hot cooking liquid. Adjust lids. Process for.....	Minutes 35	Minutes 40
Peas	<b>Green, shelled.</b> Cover with boiling water; boil 5 minutes. Pack hot; cover with fresh boiling water. Adjust lids. Process for.....	45	
	<b>Black-eyed, shelled.</b> Same as lima beans.		
Pimientos	See fruit and tomato canning table.		
Pumpkin	Peel and cut into 1-inch cubes. Add a little water and bring to boil. Pack hot; cover with hot cooking liquid. Adjust lids. Process for.....	85	105
Sauerkraut	See fruit and tomato canning table.		
Squash	<b>Summer.</b> Do not peel. Otherwise same as pumpkin. <b>Winter.</b> Same as pumpkin.		
Sweetpotatoes	Boil or steam until skin slips easily. Skin; cut into pieces. Pack hot; cover with fresh boiling water. Adjust lids. Process for.....	100	110

*We do not recommend home canning of:*

**Cabbage** (except as sauerkraut), cauliflower, celery, cucumbers, eggplant, lettuce, onions, parsnips, turnips. The flavor and texture of the home-canned product is poor, or some of these vegetables are better stored.

**Baked beans and foods of that kind.** They are extremely difficult to process at home.

**Vegetable mixtures.** It takes special directions for each combination of foods. Under home conditions it is more satisfactory, and safer, to can foods separately and do the combining later.

## TO FIGURE YIELD OF CANNED FOOD FROM FRESH

Legal weight of a bushel of a vegetable varies in different States. These are average weights:

Vegetable	Fresh	Canned
Beans, lima, in pods.....	{ 1 bu. (32 lb.) 4 to 5 lb.	6-8 qt. 1 qt.
Beans, snap.....	{ 1 bu. (30 lb.) 1½-2 lb.	15-20 qt. 1 qt.
Beets, without tops.....	{ 1 bu. (52 lb.) 2½-3 lb.	17-20 qt. 1 qt.
Carrots, without tops.....	{ 1 bu. (50 lb.) 2½-3 lb.	16-20 qt. 1 qt.
Corn, sweet, in husks.....	{ 1 bu. (35 lb.) 6-16 ears	8-9 qt. 1 qt.
Greens.....	{ 1 bu. (18 lb.) 2-3 lb.	6-9 qt. 1 qt.
Peas, green, in pods.....	{ 1 bu. (30 lb.) 2-2½ lb.	12-15 pt. 1 pt.
Squash.....	{ 1 bu. (40 lb.) 2-2½ lb.	16-20 qt. 1 qt.
Sweetpotatoes, fresh.....	{ 1 bu. (55 lb.) 2½-3 lb.	18-22 qt. 1 qt.

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## "DAY-AFTER" CANNING JOBS

When jars have cooled overnight, take off screw bands that have a glass or metal lid underneath. You can use these bands to help seal other jars. If a band sticks, don't force it, but cover with a hot, damp cloth for a minute or two, to loosen.

Test jars for leaks. One test is to turn a jar partly over in your hands—but don't use this test for jars that were sealed with a band or cap screwed over a metal lid.

Test a flat metal lid by tapping the center with the tip of a teaspoon. If sealed right, it makes a clear ringing sound. A dull, flat note means a poor seal.

In general, a poor seal gives you one of two choices: Use the food up right away. Or can it again—that is, empty jars, heat the food, pack loosely, and process as if food were fresh. If a lid was at fault, use a new one.

Wipe each good jar clean and label it, so you will know the contents and date. If you canned more than one lot in a day, add a lot number. Then if a jar of food spoils, destroy as directed and watch that lot carefully.

## WELL-CANNED FOOD DESERVES GOOD STORAGE

Store your canned food where it's cool, dark, dry. Protect the jars against bad conditions.

Warmth may make bacteria in the jars grow and multiply, and spoil the food. Hot pipes behind a wall sometimes make a shelf or closet a hot spot.

Freezing does not spoil canned food. But it may crack a jar or break a seal and let bacteria in. In an unheated storage place, you can protect canned food from freezing to some extent by covering with old carpet or a blanket, or by wrapping in newspapers.

Dampness is hard on metal caps.

Light fades canned foods, so they are less attractive; and the foods lose vitamins. For a simple "blackout" wrap each jar in dark paper.

## ON GUARD AGAINST SPOILAGE

Look closely at every jar of canned food before opening. Heed signs. A bulging lid or rubber ring, a leak, gas bubbles—these may mean the food has spoiled. When you open a

jar, look for other signs—spurting liquid, an "off" odor or color, or mold.

Corn, peas, snap beans, and tomatoes may "flat-sour" when not properly canned or properly cooled afterward. Other kinds of spoilage may also happen to food stored in too warm a place.

It's possible for foods to contain the poison that causes botulism without showing it. Boiling will usually show up botulinus poison by a bad odor. Destroy spoiled food by the methods given below.

If the pressure canner is in perfect order and if every canning step is well done, there is no danger of botulism. But unless you are absolutely sure about the canner and the way you've canned, boil home-canned vegetables before tasting. Bring to a rolling boil, cover, and boil for at least 10 minutes, adding water if necessary. Spinach and corn need 20 minutes. If the food then looks or smells queer, destroy it.

Burn spoiled food. Or stir several spoonfuls of lye into the jar of food with a stick and let stand 24 hours—out of reach of children or pets. Then bury food, lid, jar, stick, and all.

Play safe. Don't give people, animals, or poultry a chance to taste spoiled canned food.

Other publications on food preservation available from the United States Department of Agriculture are—

Take Care of Pressure Canners. AWI-65.

Oven Drying—One Way to Save Victory Garden Surplus. AWI-59.

How to Prepare Vegetables and Fruits for Freezing. AWI-100.

Home-made Jellies, Jams, and Preserves. 1800F.

Preservation of Vegetables by Salting and Brining. 1932F.

Home Storage of Vegetables and Fruits. 1939F.

This publication supersedes AWI-41, *Wartime Canning of Fruits and Vegetables*, and AW Canning Tomatoes.

*Prepared by*

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